Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	
Advanced Telecommunications	)	
Capability to All Americans in a	)	CC Docket No. 98-146
Reasonable and Timely Fashion, and	)	
Possible Steps to Accelerate Such	)	
Deployment Pursuant to Section 706 of	)	
the Telecommunications Act of 1996	)	

COMMENTS OF THE NATIONAL CABLE TELEVISION ASSOCIATION

Howard J. Symons
Michelle M. Mundt
Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
202/434-7300

Daniel L. Brenner
Neal M. Goldberg
David L. Nicoll
1724 Massachusetts Avenue, N.W.
Washington, D.C. 20036
202/775-3664

Counsel for the National Cable
Television Association, Inc.

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SUMMARY

Section 706 reflects Congress's desire to ensure that the broadband infrastructure necessary for the communications revolution reaches all Americans. It directs the Commission to examine the state of broadband deployment and to deregulate -- to "accelerate deployment" by "removing barriers to infrastructure investment" and "promoting competition" -- if the Commission finds that advanced telecommunications capability is not being made available to all Americans "in a reasonable and timely fashion."

The starting point for the Commission's inquiry under section 706 is the current state of investments in advanced networks. A review of these investments demonstrates that the deployment of advanced communications infrastructure is well underway in response to market demand for higher bandwidth. Cable companies alone are investing billions of dollars to rebuild and upgrade their systems to provide interactive broadband services and competitive local telephone service. Cable systems passing 19 million homes offer high-speed data services; by year-end, 500,000 will be taking those services. This rapid growth is attributable to the stable and predictable regulatory environment under which cable has recently been operating as well as the Commission's "hands-off" approach to regulation of the Internet and cable-provided high-speed data services.

Competitive local exchange carriers and multiple providers of "backbone" services are building networks within and between communities throughout the country. The Bell operating companies and other incumbent carriers have announced a substantial commitment to xDSL services, which will offer a competing broadband pathway to America's homes and offices. Terrestrial and satellite-delivered wireless networks offer additional alternatives. In sum, multiple providers are deploying broadband facilities (including facilities directly into homes

and businesses) at a rapid rate in an increasingly competitive environment. As a result, there is no bottleneck -- in the "backbone" network or in the "last mile" -- that would prevent subscribers from gaining access to any information service.

If the Commission were to determine that action to accelerate broadband deployment is warranted, its actions must be measured against the purpose and goals of section 706.

First, section 706 is a deregulatory statute that directs the agency to "remove barriers to investment." Of paramount importance, section 706 does not empower the FCC to impose new regulations on providers of advanced telecommunications capability. Moreover, section 706 addresses the deployment of advanced telecommunications capability, a term that does not even include cable systems used to provide cable services.

In any event, neither section 706 nor any other provision of the Communications Act authorize the Commission to subject cable operators or other competitive providers of broadband infrastructure to regulations designed many years ago to open bottleneck telephone monopolies. In particular, extending such regulations to cable operators would violate Congress's well-considered decision to limit such requirements to common carriers and to limit the reach of such obligations even among carriers based on their market power. Moreover, any such action would be fundamentally inconsistent with the policy goals embodied in section 706, and would reduce rather than enhance the incentives for investment in broadband infrastructure.

Second, as the Commission itself has recognized, section 706 is not an independent grant of authority. Rather, it directs the Commission to "remove barriers to infrastructure investment" using authority found elsewhere in the Communications Act. In this regard, section 706 does not empower the Commission to alter the regulatory structure embodied in the Communications Act or to devise a new "regulatory model" especially for the provision of advanced broadband

capability. Such a change can only come from Congress, which explicitly declined to do so when it enacted the 1996 Act.

Finally, section 706 is intended to promote investment in and the deployment of new networks. While other provisions of the 1996 Act offer alternative means for fostering the growth of competitive telecommunications markets, the focus of section 706 is on facilities-based providers. "Regulatory intervention" that leads to new burdens on competitive providers of advanced networks would turn section 706 on its head by suppressing investment in advanced infrastructure. Section 706 does not empower the Commission to commandeer advanced infrastructure for the benefit of entities that chose not to take the risks of building their own facilities.

Consistent with the deregulatory purpose of the 1996 Act, the Commission's broadband policies should be rooted in encouraging competitive risk-taking, rather than in devising new regulatory schemes. As it has in the past, the Commission should recognize that competition, not regulation, will best further the public interest and serve the needs of consumers. The explosive investment in broadband plant renders unnecessary -- and counterproductive -- new government regulation of cable operators and other competitive entrants.

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The National Cable Television Association ("NCTA"), by its attorneys, hereby submits its comments in response to the Commission's Notice of Inquiry initiated pursuant to section 706 of the Telecommunications Act of 1996.[1/] The Commission is seeking information on the deployment of advanced telecommunications capability and whether the Commission should take steps to accelerate such deployment. The Commission has asked for participation from all segments of the communications industry, including cable. NCTA is the principal trade association of the cable television industry in the United States, representing cable television operators serving over 90 percent of the Nation's cable television households and more than 100 cable programming networks.

Section 706 expresses Congress's desire to promote investment in new infrastructure for the provision of advanced telecommunications and information services. As we demonstrate,

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1/ Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, CC Docket No. 98-146, Notice of Inquiry, FCC 98-187 (rel. August 7, 1998) ("Section 706 NOI").

the deployment of broadband infrastructure by a range of competitors is well underway "in a reasonable and timely fashion."[2/]

Of paramount significance, section 706 does not empower the FCC to devise a new regulatory model especially for providers of advanced telecommunications capability or impose new regulations on providers of advanced capability. Rather, it directs the Commission to "remove barriers to infrastructure investment" using "regulating methods" otherwise found in the Communications Act if such actions are necessary to "accelerate" deployment of such capability.

Section 706 addresses the deployment of advanced telecommunications capability, a term that does not even include cable systems used to provide cable services or information services. In any event, neither section 706 nor any other provision of the Communications Act authorizes the Commission to subject competitive providers of broadband infrastructure like cable to regulations designed many years ago to open bottleneck telephone monopolies. Imposing common carrier-like regulations on cable operators fundamentally contradicts the language and policy of section 706, and would reduce rather than enhance the incentives for investment in broadband infrastructure.

I. CABLE COMPANIES ARE RAPIDLY DEPLOYING ADVANCED BROADBAND SERVICES

Through aggressive capital spending -- $6 billion in the past year alone -- and the leadership of CableLabs, as well as stable and predictable "hands-off" regulatory policies, the cable industry has managed in a short period to help the nation move quickly toward Internet service based on a broadband delivery network. This remarkable marketplace activity has been

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[2/] Telecommunications Act of 1996, Pub. L. 104-104, § 706 ("section 706")

heightened by a voluntary commitment by nearly all of the nation's cable systems -- through cable's High Speed Education Connection -- to hook up every school they pass in their service areas to cable's broadband network for free, insuring broadband access to the institutions most critical to the nation's future. Specifically,

- Cable systems passing more than 19 million homes offer broadband Internet access services.
- The High Speed Education Connection has led to over 1,000 schools in over 100 communities being connected to the Internet, free of charge, in just the first two years of this commitment.
- Cable is building on its High Speed Education Connection commitments by providing additional services to schools and libraries under the Universal Service Program for Schools and Libraries.
- Cable modems are among the fastest growing residential devices ever -- from February, 1997 to September, 1998, there has been a gain of some 2,900 percent. They provide subscribers with significantly greater transmission speeds than existing alternatives and they may be used without interfering with cable or telephone usage.
- The cable industry has developed standards so that interoperable, non-proprietary cable modems can be made available at retail, further spurring interest in, and use of, advanced broadband services.

All these developments are the result of massive capital expenditures by the industry. But these expenditures do not occur in a vacuum. They are the result of a stable and predictable regulatory environment that gives cable operators, and the financial community supporting them, confidence to make these investments. The 1996 Telecommunications Act's rate provisions, calling for a sunset of cable programming service price regulation in 1999, has been one source of that regulatory confidence. Also the FCC's careful effort, in a series of proceedings, to avoid regulation of cable's provision of Internet service or access, has fostered an environment conducive to investment, and has contributed significantly to the rapid deployment of cable broadband networks.

If this stable environment is upended, regulation of cable's broadband plant will have obvious negative effects on further infrastructure investment and broadband deployment.

A. Cable Modems Will Spur Usage of Broadband Services

1. The Advantages of Cable Modems: Speed, Capacity and Freedom

Cable television systems were originally optimized as a one-way, analog transmission system utilizing coaxial cable. To support state of the art video delivery as well as the recent growth in demand for Internet access and other two-way services, cable companies are accelerating the upgrading of their existing coaxial cable systems with fiber optic technology. These hybrid fiber-coaxial, or HFC, networks will improve the provision and reliability of existing cable services as well as new services such as high-speed data.

Cable modems open the door for customers to enjoy a range of high-speed data services, all at speeds of fifty to one hundred times faster than traditional telephone modems. Subscribers are fully connected, 24 hours a day, to services without interfering with their existing cable television or phone service. Among the services supported by cable modem technology are:

- Informational Services – access to local shopping, weather maps, household bill paying, etc.
- Internet Access – electronic mail, chat groups, and the World Wide Web.
- Business Applications – interconnecting LANs or supporting collaborative work.
- Telecommuting – enabling employees to work from home.
- Education – allowing students to continue to access educational resources from home.

The cable industry's broadband network enjoys a significant advantage over competitive alternatives for accessing the vast amounts of information available on the Internet. Access to

the Internet and information service providers over cable lines provides customers with three primary benefits: speed, capacity and freedom. The higher bandwidth of cable's fiber-coax lines enables significantly faster data transmission speeds than traditional telephone lines, and the cable connection does not interfere with normal telephone activity.

COMPARATIVE DATA TRANSMISSION SPEEDS

Telephone Modem 28.8 kbps	Approx. 5 min.
ISDN 64 kbps	Approx. 2 min.
Cable Modem 10 Mbps	Approx. 1 sec.

Telephone Modem 28.8 kbps	Approx. 22 min.
ISDN 64 kbps	Approx. 10 min.
Cable Modem 10 Mbps	Approx. 4 sec.

Kbps = kilobits per second
Mbps = megabits per second

The speed of cable modems offers cable customers an advantage no other industry currently can provide: 24-hour instantaneous access to the Internet and other on-line services such as Time Warner's and MediaOne's Road Runner, Cablevision's Optimum Online, and @Home Network, a partnership of TCI, Comcast Corporation, Cox Communications, and Kleiner Perkins Caufield & Byers. As has been noted, the telephone companies' fastest ISDN lines move data at only 128 kilobits per second, which means that users must still wait long periods of time for large files to be downloaded. At the same time, cable modems are "always on," obviating the need to "dial up" data services. Finally, cable modem services can be used without interfering with the simultaneous use of the household's cable or telephone service. In short, cable modem technology provides customers with real-time access to video, audio, and data services, optimizing their time on-line and enhancing both the usefulness and enjoyment of such services.

2. The DOCSIS Process

CableLabs, the research and development arm of the cable industry, has been actively involved in developing interface specifications for interoperable, non-proprietary cable modems so that cable modems produced by a variety of manufacturers will work on multiple cable systems and be available to consumers at local retail outlets. This process -- Data Over Cable Service Interface Specification ("DOCSIS") -- began in late 1995, even before passage of the landmark Telecommunications Act of 1996. DOCSIS also envisions having modem headend equipment available from multiple vendors.

From the outset this has been an open process with existing and prospective vendors invited to join in an open effort to design and to specify interconnection points for modems. A draft specification was developed and key components were adopted by the North American cable standard-setting body, the Society of Cable Telecommunications Engineers ("SCTE") and then by the International Telecommunications Union ("ITU"). ITU approval will enable worldwide deployment of new high-speed data services at low cost over cable infrastructure.

Upon completion of the specification writing, the DOCSIS effort moved to a technology implementation phase. Completion of this phase conclusively showed that the DOCSIS specification will allow companies to make product that meets the needs of cable operators and their customers. The next segment of this phase entailed bringing together different vendors and demonstrating that, with divergent companies interpreting the same specification, their systems would work with each other. Beginning in June, 1997, CableLabs has hosted a series of

interoperability tests at its facilities in Louisville, Colorado and at other locations such as NCTA's annual convention and the Western Cable Show.[3]

This certification process will provide cable modem equipment suppliers with a fast, market-oriented method for attaining cable industry acknowledgment of compliance with the cable Data Over Cable Service Interface Specification.

The plan's central element is a cable operator staffed Certification Board that would control the issuance of an "interoperability seal" and compliance with the DOCSIS process. The seal is meant to provide a purchasing cable operator or a retail distributor with confidence that the certified modem equipment interoperates with other DOCSIS products made by other vendors.

The roll-out of DOCSIS-compliant cable modems -- available at retail -- will undoubtedly spur use of broadband services, providing additional incentives for cable companies and other providers to deploy networks capable of supporting broadband services. As we now show, even prior to deployment of DOCSIS-certified modems, the cable industry is in the forefront of the delivery of such services.

B. Cable's Deployment of Broadband Internet Access Service

Deployment by cable systems of broadband Internet access service is occurring at a rapid rate throughout the United States. Cable companies large and small are offering broadband Internet access as one of several new offerings available once plant is upgraded. Since cable companies have concluded that broadband Internet access service can be a viable commercial

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[3] The purpose of these interoperability tests was to advance the ability of participating vendors to meet all of the technical requirements for conformance of their modem and headend equipment to the DOCSIS standard. Vendors believing their equipment meets the standard are required to secure MSO certification that their

Footnote cont'd

venture even in an increasingly competitive broadband marketplace, they are designing their systems to deliver the service even though consumer demand for the service is limited now.

The commitment of the cable industry and a plethora of others (see Section II infra,) to offer broadband Internet access under existing regulatory conditions is compelling evidence that regulatory action is not needed in order to promote the availability of advanced services.

Each of the 18 largest cable companies, and many smaller companies, are rolling out cable modem service to the communities they serve. Cable modem service is now available in portions of at least 40 states. Deployments range from the largest to the smallest communities, from parts of Los Angeles to parts of rural South Dakota and Kansas. Implementation has been undertaken not only by the largest MSOs, such as TCI, Time Warner, MediaOne, Cox, Comcast and Cablevision, but also by mid-size and smaller companies. Appendix #1 demonstrates the breadth of the cable industry's near-term commitment to deploy broadband Internet access.

Cable systems passing more than 19 million homes, nearly one-fifth of all residences, are offering broadband Internet access. Chart #1 shows that cable companies passing 39 millin homes will be offering high-speed Internet access in two years. According to data compiled by Paul Kagan Associates, the service will be offered to more than 67 million cable homes by 2005.

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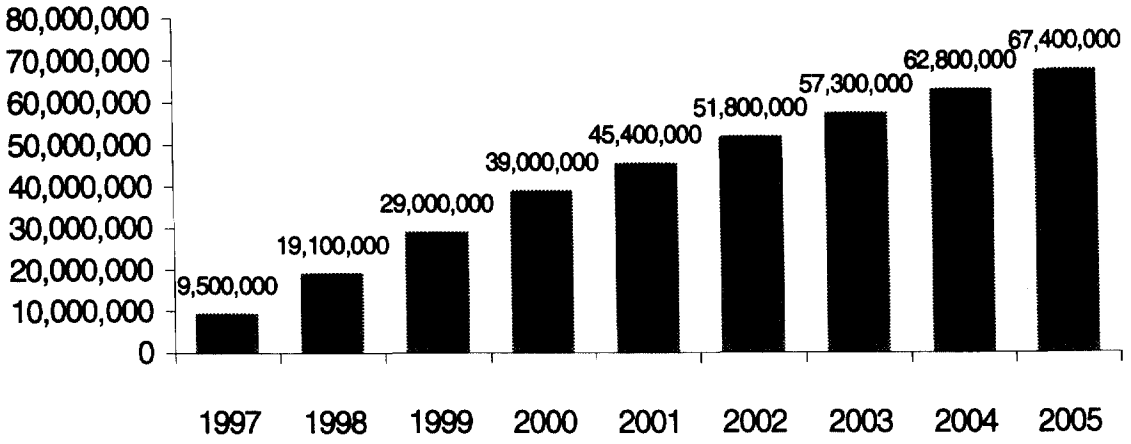
devices do in fact fully conform to the DOCSIS specification. A number of vendors have already initiated the certification process and more are expected to follow.

Chart #1

Homes Passed by Cable Systems Offering High-Speed Internet Access Service



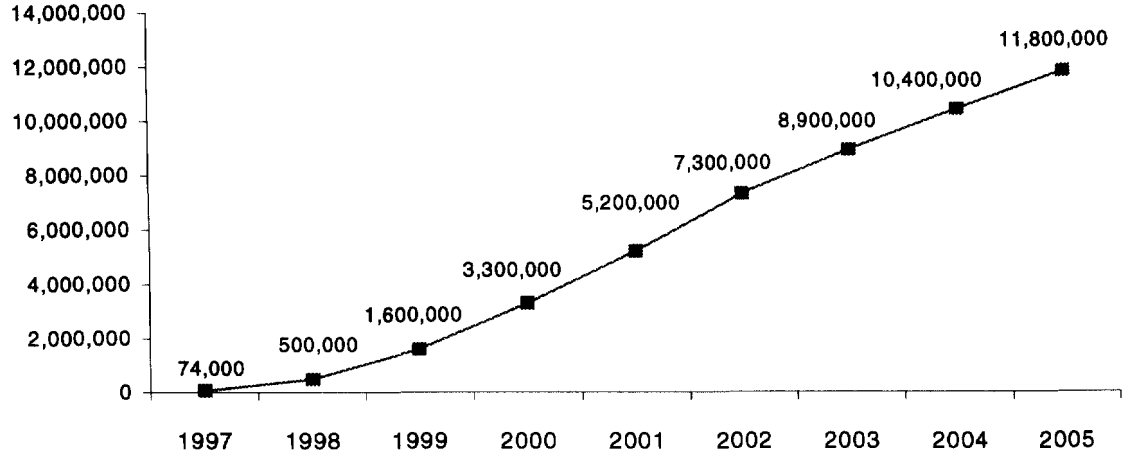
Source: 1998 Paul Kagan Associates, Inc., *Cable TV Technology*, Aug. 26, 1998, p. 3

These rollouts have resulted in significant growth in the number of cable modem customers in the last year and a half—skyrocketing from approximately 10,000 customers in February 1997 to some 300,000 customers today, an increase of some 2,900 percent. By the end of this year, 500,000 customers are expected to subscribe to cable's high speed Internet access service.

The short-term results and projections are miniscule when compared to the demand that the service is expected to generate in the coming years. Chart #2, based upon data compiled by Paul Kagan Associates, indicates the number of High-Speed Internet Access Service Cable Subscribers is expected to more than triple next year to 1.6 million. The number of subscribers is projected to then more than double by the year 2000 to 3.3 million, to more than double again to 7.3 million two years later, and to reach 11.8 million by 2005.

Chart #2

High-Speed Internet Access Service Cable Subscribers
1997 – 2005



Source: 1998 Paul Kagan Associates, Inc., *Cable TV Technology*, Aug. 26, 1998, p. 3

These Kagan estimates may be conservative. According to a recent report by Forrester Research, Inc., the number of cable modems will reach 700,000 by the end of this year and 2 million by the end of the next.[4]

The foregoing estimates demonstrate that broadband Internet access will be deployed by cable at a rapid rate. As we note below, the Forrester Report, Kagan and the Prudential Securities Report[5] also show that telephone company ADSL service will be competing with cable's broadband service, each providing the other with a constant spur to the quality, price and increasing availability of each service. Moreover, as noted in Section II, infra, other providers --

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4 Forrester Research, Inc., The Forrester Report, People and Technology, "Broadband Hits Home," Vol. Five, No. Four, Aug. 1998.

5 ADSL HAS THE POTENTIAL TO SOLVE THE BANDWIDTH BOTTLENECK AND ADD TO LARGE LEC NET INCOME GROWTH, Prudential Securities, Telecommunications Services Industry Report (rel. Aug. 27, 1998) ("Prudential Report").

such as terrestrial wireless service providers and satellite companies have also significantly increased their involvement in the broadband market in recent years. In sum, it is clear that the marketplace will ensure that residences and businesses receive broadband Internet access on a timely basis.

C. Cable's Deployment of Broadband Internet Access Service to Schools

Cable companies are complementing their aggressive schedules for deployment of residential broadband Internet access service with a program to employ cable facilities to connect schools to the Internet. The cable industry's public service initiative, the High Speed Education Connection, beginning its third year in October, 1998, connected over 1,000 schools in more than 100 communities to the Internet free of charge as of March, 1998.[6] The High Speed Education Connection is the cable industry's commitment that, as cable modem service is deployed in a community, every school that is passed by modem-capable facilities will be connected to the Internet with a free modem and no monthly service charge. In addition, several companies have committed to a free connection of public libraries in areas that are served by modem-capable plant. A list of communities in which schools have been connected is attached as Appendix #2.

Cable companies have also been entering into agreements to provide advanced services to schools and libraries pursuant to the Universal Service Program for Schools and Libraries. Cable companies have been competing for contracts under the rules established for this program. A number of companies have been successful, winning competitive bids to provide services and facilities ranging from Internet access to high speed distance learning, to local and wide area

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[6] A new survey of schools connected pursuant to cable's High Speed Education Connection is underway. The results should be available shortly and we will provide them to the Commission at that time.

networks. Cable participation in the bid process further demonstrates cable's commitment to the deployment of advanced services to schools and libraries.

Set forth below are several examples of cable companies that have been successful in winning competitive bids, and the services or facilities they expect to provide to the bid recipients.

EXAMPLES OF WHERE CABLE COMPANIES ARE OFFERING ADVANCED SERVICES TO SCHOOLS AND LIBRARIES PURSUANT TO THE UNIVERSAL SERVICE PROGRAM

Armstrong Cable	Numerous School Districts and Libraries in Pennsylvania and Ohio	High Speed Internet Access, LANs, WANs and ATM Networks
Bresnan Communications	White Plains, New York	Internet Access, WANs
Cox Communications	Newport News, Virginia; Norfolk, Virginia; Hampton, Virginia	WANs, High Speed Internet Access
Eagle Communications	Russell, Kansas; Goodland, Kansas; Hays, Kansas	LANs, WANs, Internet Access
Galaxy Cablevision	Multiple School Districts in Missouri and Kansas	LANs, WANs, Internet Access
Horizon Cablevision	Williamston, Michigan; Fowlerville, Michigan	Internet Access
Marcus Fiberlink	Fox Valley, Wisconsin	High Speed Internet Access
Media One	East Granby, Connecticut	Internal Connections, wiring
Multimedia	Putnam, Oklahoma; Gutherie, Oklahoma; Oklahoma City, Oklahoma	WANs, LANs, Internal Connections and Internet Access
MidContinent Cable	Aberdeen, South Dakota	High Speed Internet Access
Susquehanna Data Services	York, Pennsylvania	WANs, LANs, Internet Access
Time Warner	Cincinnati, Ohio	WANs, LANs, Internet Access

Source: NCTA research and contacts.
August, 1998

As is made clear from the above, cable companies are offering their broadband services to schools in urban, suburban and rural areas.

D. Cable Deployment of Cable Telephony

Cable companies have been active in the deployment of circuit switched telephony. Cable companies are also considering the introduction of IP-based telephony. While circuit switched telephony does not constitute an advanced service per se, the industry's deployment of

circuit switched telephony over integrated broadband plant is indicative of its efforts to extend the reach of broadband capable plant and the services available to customers. The offering of telephony services helps to justify the cost of implementing integrated broadband networks, and it positions cable companies to provide the wide array of services potentially available through the integrated broadband plant. A listing of companies providing cable telephony and their locations is set forth at Appendix #3.

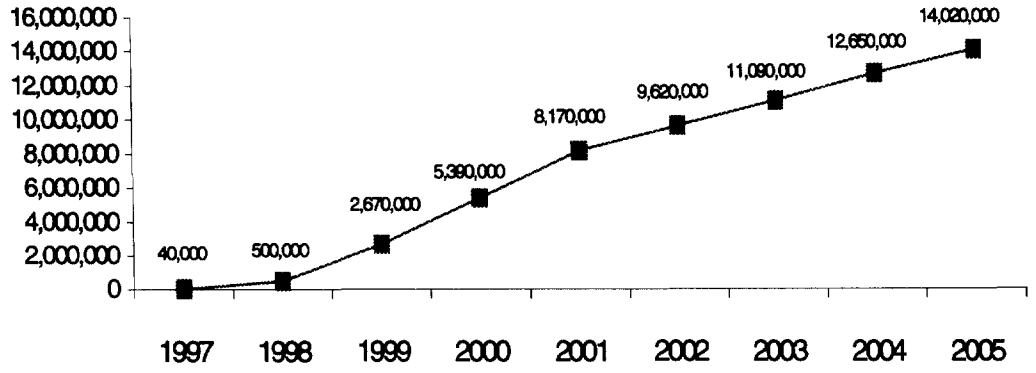
E. Cable's Deployment of Digital Video Services

In addition to offering Internet, high-speed data and telephony services, cable companies are utilizing their upgraded digital networks to offer a wide array of new broadband video services to subscribers. They too are an important additional, state of the art communications service. By upgrading their networks to become digital video capable, cable companies achieve significant economies of scope, while simultaneously expanding the video choices that are available to subscribers.

Consumer demand for digital program tiers is accelerating rapidly. Estimates by Paul Kagan Associates indicate there were 40,000 customers for cable's digital video services in 1997. The number of digital subscribers will increase by more than 11 times, to 500,000 by the end of this year. And the number of digital video subscribers is expected to grow by five times to 2.67 million in 1999, 5.39 million in 2000 and more than 14 million in 2005. Chart #3 illustrates the anticipated growth of cable digital video services.

Chart #3

Growth of Households with Digital Cable Tiers
1997-2005



Source: 1998 Paul Kagan Associates, Inc., *Cable TV Technology*, Jan. 31, 1998, p. 4

* * * *

In sum, cable companies are at the forefront in the offering of Internet access, high-speed data, telephony and video services. They are responding to perceived market demand for all of these services in urban, suburban and rural areas.

II. OTHER PROVIDERS ARE DEPLOYING ADVANCED TELECOMMUNICATIONS CAPABILITY IN A REASONABLE AND TIMELY MANNER

In addition to the investments by cable operators detailed above – and in some cases, in response to those investments – local telephone companies, wireless service providers, and satellite companies are investing tens of billions of dollars to deploy broadband facilities. Many of these new facilities are in the "last mile" to the end user. For example, the RBOCs report spending roughly $18 billion in capital improvements in 1996, and are currently spending

"hundreds of millions a year" to accommodate the growing use of online services.[7/] The RBOCs have repeatedly identified their "excellent record of investing aggressively in new telecom technologies and infrastructure."[8/] U S WEST has said that it has invested more than $1.9 billion of capital in 1997 alone to construct, improve, upgrade and repair the telephone network within its region.[9/] Bell Atlantic indicates that it spent $300 million on its network last year merely to accommodate the development of the online medium.[10/]

The investments being made by these and other RBOCs are providing increasing numbers of subscribers with a broadband pathway to their homes and businesses. Bell Atlantic, for example, deployed over 3.8 million fiber miles in 1997, and all of the RBOCs have begun to deploy elaborate frame relay systems[11/] and Asynchronous Transfer Mode ("ATM") switches[12/] to meet the growing demand for broadband services.

7/ Petition of Bell Atlantic Corporation for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-11, Petition of Bell Atlantic (filed January 16, 1998) ("Bell Atlantic 706 Petition") at Attachment 2, p. 44 (citing 1996 Annual Reports of Bell Atlantic, SBC, Pacific Telesis, NYNEX, BellSouth, U S WEST and Ameritech.)

8/ Id. at Attachment 2, p. 43.

9/ Petition of U S WEST Communications, Inc. for Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-26, Petition for Relief (filed February 25, 1998) ("U S WEST 706 Petition") at 6.

10/ Bell Atlantic 706 Petition at Attachment 2, p. 44.

11/ Frame relay is a protocol oriented, packet-switched technology that is particularly well-suited to the transmission of data. It provides a packet-switching data communications capability that is used across the interface between user devices (e.g., routers, bridges, host machines) and network equipment (e.g., switching nodes). U S WEST, whose frame relay operations are the largest of any local exchange carrier ("LEC") in the nation and the third largest (behind AT&T and Sprint) overall, has deployed over 350 frame switches across all fourteen states in its region and had over 47,000 customer ports at the end of 1997. U S WEST 706 Petition at 7.

12/ ATM is an international standard for high-speed broadband packet-switched networks operating at digital transmission speeds above 1.544 Mbps. ATM includes a protocol that specifies how diverse kinds of traffic are transformed into standardized packets whose transport can be managed uniformly within the network. U S WEST has deployed over 100 next-generation ATM switches across ten of its states. Id.

In particular, high-speed Digital Subscriber Line[13/] ("xDSL") service offerings by the RBOCs and other ILECs have proliferated in response to investments by cable and others in broadband capacity.[14/] U S WEST was among the first to unveil its plans to deploy xDSL service throughout its service region by announcing that it would be offering ADSL[15/] service to forty cities across fourteen states by the first half of 1998.[16/] In May 1998, SBC's Pacific Bell subsidiary announced that it will begin to deploy ADSL service in more than 200 California communities, including San Jose, San Francisco, Oakland, Anaheim, Los Angeles and Sacramento, before the end of the summer, and that its ADSL-equipped central offices will be capable of serving approximately 4.4 million households and 650,000 business customers.[17/]

Bell Atlantic has announced that it intends to make its Infospeed DSL services widely available in Washington, D.C. and parts of Maryland, New Jersey, Pennsylvania and Virginia this month, and that the New York City and Boston metropolitan areas will come on-line in 1999.[18/] Ameritech, too, has indicated that it will begin hooking up as many customers as

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13/ Of all of the technologies being deployed by the RBOCs, xDSL service holds the most promise for business and residential end users. xDSL technology separates voice from data traffic in the early stages of transit, thereby moving data traffic from the circuit switched network to the more efficient, data-friendly packet-switched network.

14/ See, e.g., Petition of Ameritech Corporation to Remove Barriers to Investment in Advanced Telecommunications Capability, CC Docket No. 98-32, Petition of Ameritech Corporation (filed Mar. 5, 1998), at 28-29; Prudential Report at 1,6 (concluding that the competitive threat from cable companies deploying high-speed Internet access services has motivated the large LECs to deploy ADSL quickly).

15/ Advanced Digital Subscriber Line, or "ADSL," service is an xDSL offering that provides for upstream transmissions at speeds of up to 384 Kbps and downstream transmission at speeds of up to 1.5 Mbps.

16/ "U S WEST Brings Lightning Fast New Internet Access to Homes in 40 Cities by June 1998: Nation's 1st Regionwide Deployment of High-Power ADSL Internet and Data Networking," Press Release (Jan. 29, 1998) <http://www.uswest.com/com/insideusw/news/ 012998.html>.

17/ "SBC Communications Announces Broad ADSL Deployment Across California," Press Release (May 27, 1998) <http://www.sbc.com/News/Article.html?query_type=article&query =19980527-02>.

18/ "Availability of Bell Atlantic Infospeed DSL" <http://www.bell-atl.com/adsl/more_info /availability.html>.

possible to its xDSL service, and that by the year 2000, seventy percent of the homes in the Great Lakes region will have access to the service.[19/]

In addition to incumbent carriers, CLECs and others have begun to deploy affordable, high-speed packet-switched technologies to meet the demands of the broadband marketplace. For example, start-ups like NorthPoint Communications, Inc., ICG Netcom, Inc. and Concentric Network Corp. have already begun providing xDSL service in a variety of cities, and each has announced plans to expand coverage in the months ahead.[20/] In addition, companies such as WorldCom,[21/] Qwest,[22/] IXC Communications,[23/] Frontier Corporation,[24/] Williams,[25/] and Level 3

19/ "Ameritech Questions and Answers on ADSL Service" <http://www.ameritech.com/ products/ data/ adsl/ index.html#where>.

20/ See, e.g., "The NorthPoint Communications Network Continues Nationwide Expansion," Press Release (July 13, 1998) <http://www.northpointcom.com/html/home.html>; "Netcom Announces Digital Subscriber Line ("DSL") Internet Strategy and Q3 1998 Launch Plan," Press Release (Aug. 24, 1998) <http://www.icgnetcom.com/news/releases/1998/8-24.htm>; "Concentric Network Launches High-Speed DSL Internet Services in Southern California, Becoming Largest DSL-Based Internet Services Network in the State," Press Release (July 20, 1998) <http://www.concentric.net/press_center/1998/ cal_dsl.html>.

21/ WorldCom, through its UUNET subsidiary, is today one of the leading providers of Internet backbone capacity. In addition to its recent purchase of MCI, WorldCom has made considerable investments in its infrastructure, launching a $300 million upgrade and expansion of its network last year. See "WorldCom Announces $300 Million Expansion of UUNET Network; High Demand for Internet Network Drives Major Expansion," PR Newswire, available in the Westlaw USNEWS database (Feb. 19, 1997).

22/ Qwest is building a 16,000 mile fiber optic network that it expects to complete in mid-1999. The network will serve over 125 cities in the United States with SONET facilities utilizing OC-192 transmission links. In addition to investing in its network, Qwest recently merged with LCI International, Inc., establishing it as one of the largest interexchange providers for business and residential services. See "Qwest Lights Network to Cleveland," Press Release (Mar. 4, 1998) <http://www.qwest.net/press/030498.html>.

23/ IXC plans to build an 18,000 mile nationwide network of high-speed fiber facilities, and has already deployed a nationwide SONET-based network capable of carrying high-speed, bandwidth intensive data services. See "IXC Communications Takes Industry Lead in Coast-to-Coast High-Capacity Transmission," Press Release (Feb. 10, 1998) <http://www.ixc-investor.com/02-10-98.html>.

24/ Frontier plans to build a 13,000 mile nationwide SONET network designed to carry Internet protocol data, fax and voice applications. See "Frontier Takes Next Step in Executing Data Strategy," PR Newswire, available in the Westlaw USNEWS database (Mar. 25, 1998).

25/ Williams recently reentered the wholesale telecommunications market, and has announced that it intends to spend $2.7 billion to build a 32,000 mile fiber optic system by 2001. The company intends to connect 69 cities to its network this year, and will connect over thirty more by the time its network is completed. See "Williams Accelerates Expansion of Fiber-Optic Network; Plans $2.7 Billion Investment in 32,000-Mile System by 2001," Press Release (Feb. 11, 1998) <http://www.twc.com/news/rel156.html>.

Communications[26] are all in the process of constructing advanced telecommunications networks to link various exchanges nationwide.[27] These advanced networks are providing data users with an efficient and reliable means of transmitting information throughout the nation and reflect the tremendous scope and depth of the investments that are being made in the broadband arena.

Terrestrial wireless service providers and satellite companies also have increased their level of involvement in the broadband market in recent years. For example, companies such as Metricom have invested considerable sums developing wireless modems that enable end users to connect to the Internet at significantly faster speeds than those supported by standard telephone lines.[28] AT&T's "Project Angel," which has been in development since 1994, promises to provide two voice lines and one 128 Kbps data channel to end users through a small base station mounted to the side of a subscriber's home, thereby adding another "last mile" alternative for end users.[29] Applicants for broadband wireless Local Multipoint Distribution Service ("LMDS") bid $600 million at the FCC's auction last March just for the right to provide service.[30] Since

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26/ Level 3 plans to build a 20,000 mile nationwide fiber optic network using TCP/IP protocols, and has already raised $2.5 billion to fund the construction of its network. See Reinhardt Krause, Will Telecom Firms Gain on Steady Diet of Fiber?, Investors Business Daily at A8 (Mar. 3, 1998).

27/ WorldCom acquired part of its Internet backbone facilities from America Online ("AOL"), which sold its AOL Network Services division to WorldCom in exchange for WorldCom's CompuServe subscribers. With that transaction, AOL abandoned its strategy of investing in facilities to focus solely on providing content and other services. See Rajiv Chandrasekaran, AOL Shifts Its Strategic Direction; Content Focus Lauded; Deal's Price Questioned, Washington Post, Sept. 9, 1997, at C1; see also Rajiv Chandrasekaran, AOL's Man With a Mission; Marketing Whiz Bob Pittman Is Out to Make the Service a True Mass Medium, Washington Post, Feb. 15, 1998, at H1.

28/ See James Fallows, A New Sense of What Modems Could Be; In a Wired Age, The Plugged In Will Be Wireless, U.S. News and World Report Online (Apr. 6, 1998) <http://www.usnews.com/usnews/issue/980406/6metr.htm>.

29/ See "Real Competition in Communications: A Challenge for the Referees," Speech by John R. Walter, President and Chief Operating Officer of AT&T, NARUC Winter Meeting, Washington, D.C. (Feb. 25, 1997) <http://www.att.com/speeches/97/970225.jra.html>.

30/ "LMDS Auction Closes: Winning Bidders in the Auction of 986 Local Multipoint Distribution Service (LMDS) Licenses," Public Notice, DA 98-572 at 18 (March 26, 1998).

then, Advanced Radio Telecom and WinStar have announced that they will deploy wireless broadband services within the next several months.[31/]

DirecPC, a product of Hughes Network Systems, enables users to access the Internet at high speeds through digital satellite transmissions.[32/] Teledesic, another global satellite concern, is spending $9 billion on its "Internet-in-the-Sky" project, which will provide its users with affordable, worldwide, "fiber-like" access to telecommunications services such as broadband Internet access, video-conferencing, and high-quality voice and digital data service beginning in 2003 using a constellation of 288 low-Earth-orbit satellites.[33/]

As detailed above, the record in this proceeding will undoubtedly show that there is widespread deployment of broadband capability. As these investments make clear, the communications industry is not lacking in incentives to invest in and deploy a variety of broadband facilities, including in the last mile to the subscriber. If anything, the Commission's pro-competitive, deregulatory marketplace approach to the medium has spurred companies to invest in new infrastructure to compete for customers.

31/ See Nancy Gohring, "Broadband Wireless Poised for Takeoff," Telephony at 8 (August 17, 1998).

32/ See "Hughes Network Systems Launches DirecPC 2.0 With New Service Pricing, Bundled ISP Service, Electronic Program Guide, Turbo Webcast and Turbo Newscast; Latest Version of DirecPC Offers Customers the Ultimate in Speed, Service and Convenience," Press Release (June 23, 1998) <http://www.direcPC.com/about/pr_20.html>.

33/ See "Teledesic, Motorola, Boeing, Matra Marconi Space to Partner on 'Internet-in-the-Sky;' Motorola Will Lead Global Industrial Team," Press Release (May 21, 1998) <http://www. teledesic.com/newsroom/05-21-98.html>. See also In the Matter of En Banc Hearing on Broadband Services (July 9, 1998), Transcript Comments of Scott Hooper, co-CEO of Teledesic and Chairman of Nextlink Communications at 9-13, <http://www.fcc.gov/enbanc/070998/ eb070998.html>.

III. ANY ACTION TAKEN PURSUANT TO SECTION 706 MUST BE CONSISTENT WITH THE INTENT OF THAT SECTION AND THE COMMUNICATIONS ACT

While the scope of the Commission's inquiry under section 706 is indisputably broad, it is bounded by the language of the statute itself. The focus of section 706 is the deployment of "advanced telecommunications capability" and whether action is needed to "accelerate deployment" of this capability by "removing barriers to infrastructure investment" and "promoting competition in the telecommunications market."[34/] If deployment has been "reasonable and timely," then the Commission need not take action, while permitting broadband facilities to develop in response to market forces.[35/]

If the Commission were to determine that action to accelerate broadband deployment is warranted, its actions must conform to the purpose and goals of section 706. Measured against this standard, there is no basis for imposing new regulations on cable systems. As a threshold matter, cable systems providing cable and information services are not providing advanced telecommunications capability. In any event, section 706 is a deregulatory statute intended to foster infrastructure investment. Section 706 does not empower the Commission to devise a new regulatory model addressed to providers of advanced telecommunications capability nor does it authorize the Commission to impose new regulations on providers of advanced capability -- or

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34/ Section 706(b).

35/ The Senate Report on the provision that became section 706 underscores this instruction:

> [Section 706] is intended to ensure that one of the primary objectives of the bill – to accelerate the deployment of advanced telecommunications capability – is achieved. . . . [T]his provision is a necessary failsafe to ensure that the bill achieves its intended infrastructure objective. The goal is to accelerate deployment of an advanced capability that will enable subscribers in all parts of the United States to send and receive information in all its forms – voice, date, graphics and video – over a high-speed switched, interactive, broadband, transmission capability.

S. Rep. No. 104-23, 104th Cong., 1st Sess. 50-51 (1995) (emphasis added).